

LOFAR Beam-formed Modes

User Experience - LOFAR Users Meeting

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Archiving

- Until recently not possible to archive pipeline products.
- Situation seems to be improving with the integration of “pulp” into the control system.
- Managing the data is still tricky especially because of the volume.

COBALT

- Test data was lying idle for 2 months.
- Desire to integrate pulsar pipeline was sprung on our group last-minute.
- No more simultaneous imaging + beam-formed?

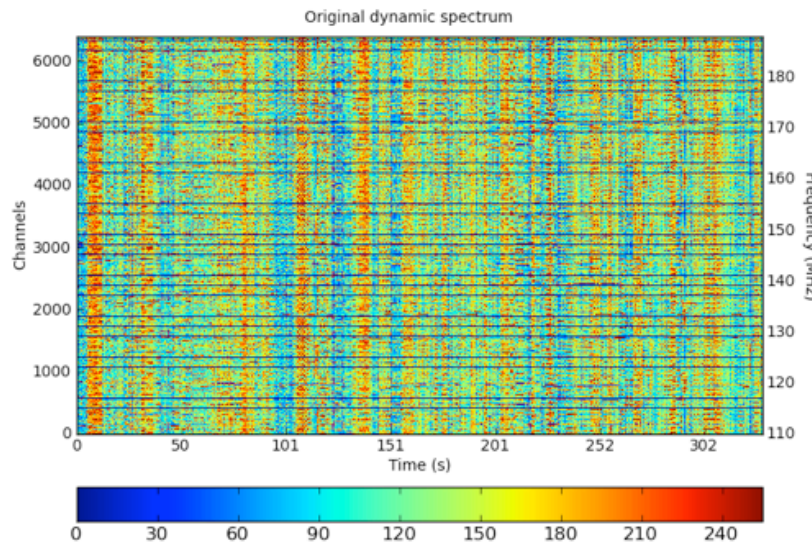
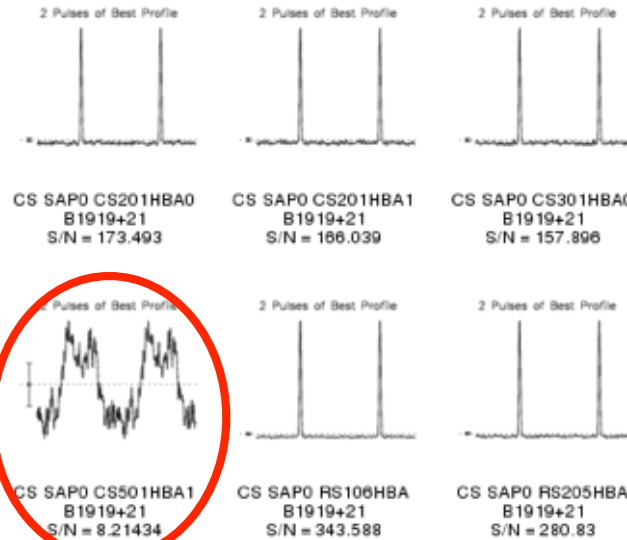
System Stability

- Stability of station health - particularly the oscillating tiles - is a *major concern*.
- Risk of not finishing Cycle 1.
- 2 weeks of observing/effort lost due to incorrect phase calibration table.
- Need to have careful tracking of phase-calibration table changes *and* any clock changes.
- Policy of single repeat observation, despite all this.

Example Oscillating Tile

CS501 Tile 41

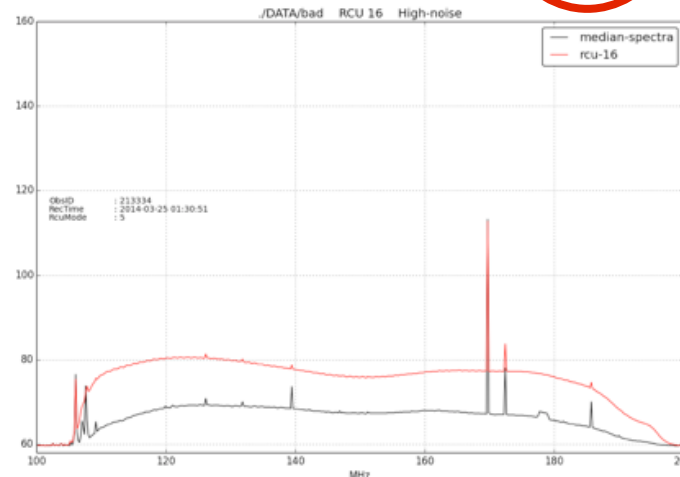
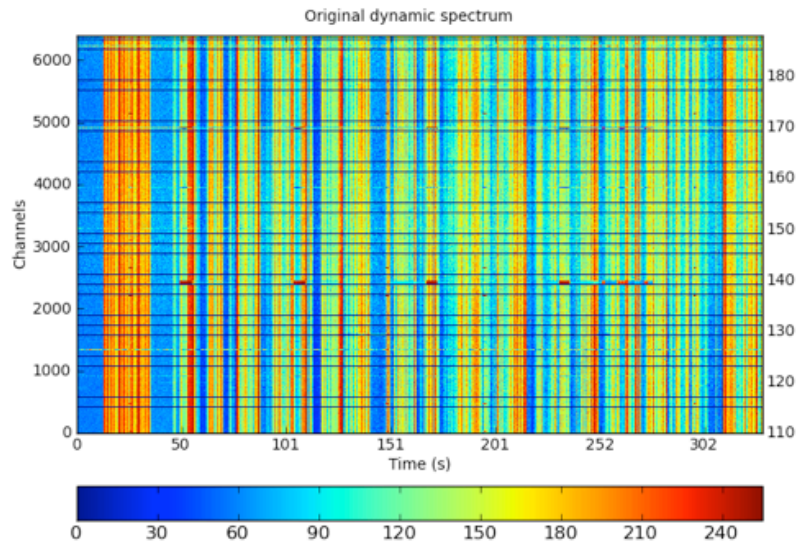
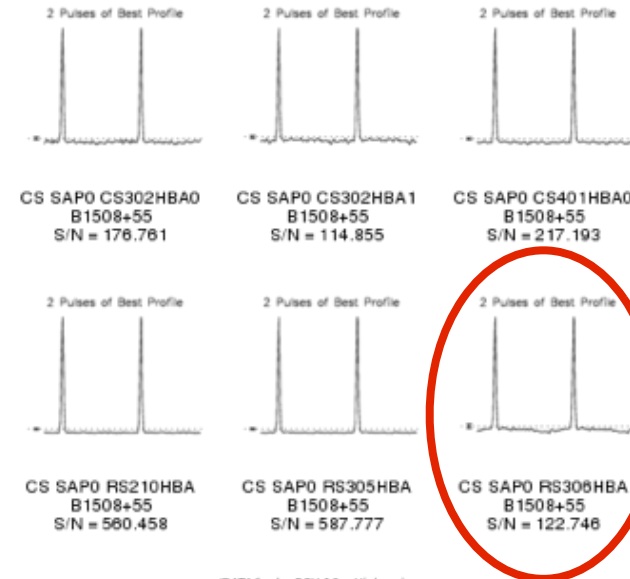
- ID 213342: 2014-03-25 07:17:30-07:23:00
- Note:
 - continuous
 - no pulsar



Example High-Noise Tile

RS306 Tile 8 [high noise ex]

- ID 213334: 2014-03-25 01:26:00-01:31:30
- Note:
 - not continuous (twice detected in 12hrs)
 - reduced S/N



Needed Functionality

- Online RFI flagging (allows rejection of single stations).
- Writing out data as 8, 4, 2, or 1-bit samples.
- Very regular FE observations and station tests until the tile issue is no longer a problem.

Support

- Would like to transition to Science Support preparing observations, running the pipeline, and archiving.